

10/501196

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SEQUENCE LISTING

<110> NEW ENGLAND BIOLABS, INC.
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XU, SHUANG-YONG

<120> ALTERATION OF RESTRICTION ENDONUCLEASE SPECIFICITY BY GENETIC SELECTION

<130> NEB-198-PCT

<150> US 60/347,403

<151> 2002-01-10

<160> 2

<170> PatentIn version 3.1

<210> 1

<211> 612

<212> DNA

<213> Bacillus stearothermophilus Y406

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<222> (1)..(612)

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| 1 5 10 15 | |
| caa gtt cac ttg cca cat att tgg gaa gaa att caa gaa att att gtt | 96 |
| Gln Val His Leu Pro His Ile Trp Glu Glu Ile Gln Glu Ile Ile Val | |
| 20 25 30 | |
| tct att gac gca gaa gct tgt aga acg aag gaa tca aaa gaa aag aca | 144 |
| Ser Ile Asp Ala Glu Ala Cys Arg Thr Lys Glu Ser Lys Glu Lys Thr | |
| 35 40 45 | |
| aaa caa gga caa ata ctt tat agt ccc gta gct tta aat gaa gca ttc | 192 |
| Lys Gln Gly Gln Ile Leu Tyr Ser Pro Val Ala Leu Asn Glu Ala Phe | |
| 50 55 60 | |
| aag gaa aaa tta gaa gca aaa ggt tgg aaa gaa agt cga aca aac tat | 240 |
| Lys Glu Lys Leu Glu Ala Lys Gly Trp Lys Glu Ser Arg Thr Asn Tyr | |
| 65 70 75 80 | |
| tat gtg act gct gac cca aag ctg att cgt gaa aca tta tca ctt gaa | 288 |
| Tyr Val Thr Ala Asp Pro Lys Leu Ile Arg Glu Thr Leu Ser Leu Glu | |
| 85 90 95 | |
| cca gag gaa caa aag aaa gtg att gaa gcc gca gga aaa gaa gca tta | 336 |
| Pro Glu Glu Gln Lys Lys Val Ile Glu Ala Ala Gly Lys Glu Ala Leu | |
| 100 105 110 | |
| aag tct tat aat caa acg gat ttt gta aaa gat aga gtg gca ata gaa | 384 |
| Lys Ser Tyr Asn Gln Thr Asp Phe Val Lys Asp Arg Val Ala Ile Glu | |
| 115 120 125 | |
| gtt caa ttc gga aaa tat tct ttt gtc gct tat gac ctt ttc gtc aaa | 432 |
| Val Gln Phe Gly Lys Tyr Ser Phe Val Ala Tyr Asp Leu Phe Val Lys | |
| 130 135 140 | |
| cac atg gct ttc tat gtt agt gat aaa att gac gtt ggt gtc gaa ata | 480 |
| His Met Ala Phe Tyr Val Ser Asp Lys Ile Asp Val Gly Val Glu Ile | |

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145              150              155              160
ttg cca atg aag gaa tta tca aaa gaa atg tct tcg gga atc agt tat      528
Leu Pro Met Lys Glu Leu Ser Lys Glu Met Ser Ser Gly Ile Ser Tyr
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tac gaa ggt gaa tta tac aat gtg ata cgg caa ggt cgt ggc gtt cct      576
Tyr Glu Gly Glu Leu Tyr Asn Val Ile Arg Gln Gly Arg Gly Val Pro
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gcc gtt ccg ttg gtt tta atc ggg att gcc cct taa      612
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<213> Bacillus stearothermophilus Y406

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Ser Ile Asp Ala Glu Ala Cys Arg Thr Lys Glu Ser Lys Glu Lys Thr
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Lys Gln Gly Gln Ile Leu Tyr Ser Pro Val Ala Leu Asn Glu Ala Phe
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Lys Glu Lys Leu Glu Ala Lys Gly Trp Lys Glu Ser Arg Thr Asn Tyr
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Tyr Val Thr Ala Asp Pro Lys Leu Ile Arg Glu Thr Leu Ser Leu Glu
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Pro Glu Glu Gln Lys Lys Val Ile Glu Ala Ala Gly Lys Glu Ala Leu
100             105             110

Lys Ser Tyr Asn Gln Thr Asp Phe Val Lys Asp Arg Val Ala Ile Glu
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Val Gln Phe Gly Lys Tyr Ser Phe Val Ala Tyr Asp Leu Phe Val Lys
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His Met Ala Phe Tyr Val Ser Asp Lys Ile Asp Val Gly Val Glu Ile
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Leu Pro Met Lys Glu Leu Ser Lys Glu Met Ser Ser Gly Ile Ser Tyr
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Tyr Glu Gly Glu Leu Tyr Asn Val Ile Arg Gln Gly Arg Gly Val Pro

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180

185

190

Ala Val Pro Leu Val Leu Ile Gly Ile Ala Pro
195 200